



OWRC CHAIRMAN, D. J. COLLINS, addresses OMWA delegates during panel discussion. The meeting took place at the Royal York Hotel in Toronto.

## Future Of Water Management Is Key Topic At Fourth Annual OMWA Meeting

The future of water management in Ontario was the keynote consideration at the Fourth Annual Meeting of the Ontario Municipal Water Association, held recently in Toronto. The conference attracted people from widespread areas of the province, representative of the water works industry.

Highlight of the one-day meeting was an afternoon panel discussion in which panelists J. H. Kuranz, president of the American Water Works Association, R. Farrow, head of the regional government section of the Provincial government, and D. J. Collins, chairman of the Ontario Water Resources Commission considered the future of water commissions.

Mr. Farrow explained the research and planning behind municipal government reorganization. He argued

against single purpose bodies.

Mr. Collins elaborated on the role of OWRC, pointing out that the utility servicing, including that provided by the Commission, is often taken for granted because of successful performance of duties. While conceding that "conflict is good" he said water and sewage plans "sometimes get lost in the tangle of pressures." The role of the department of municipal affairs and local government is to plan development, he stressed, pointing out that both provincial and municipal utilities must be prepared to accept policy decisions of government. The OMWA must make its case for continued reliance on the utilities concept and accept the decision of government, he said. He added that he thought the concept a good one.

Mr. Collins said the present trend within the Commission is to give more attention to area planning of services and continue assistance in engineering advice to municipalities. The management of facilities should remain local as much as possible, he asserted.

Most questions in the audience participation period of the panel discussion referred to regional government. The questions primarily concerned why the present well-established organization of water and hydro servicing was to be scrapped under regional government. There was an indication that the matter was being re-studied.

Mr. Kuranz provided an American viewpoint, suggesting that services should be under private enterprise, if possible, but that at least all water "should be metered and sold as a product."



Water management in Ontario

# Watertalk

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## Course Spotlights Algae Problems

Algae were the centre of interest at a recent course held at the OWRC laboratories. The intensive course was conducted by Commission staff to familiarize Ontario water works personnel with techniques of identifica-

tion and enumeration of algae.

Besides causing taste and odour problems, algae sometimes interfere with the operation of water treatment plants. Labs and lectures contained in the course will aid plant personnel

in countering these adverse effects.

Techniques learned during the course will also permit water management personnel to assess the effects of waste treatment methods on inhibiting eutrophication.



TECHNICIAN GORD J. HOPKINS, assisted by Ruth Higginson, adjusts microscope for interested participant in algae course held last month at the Commission laboratories.

## Eutrophication Stressed At IJC Hearings

A series of public hearings on boundary waters, held in late January and February, attracted hundreds of persons from virtually all sectors of society.

The hearings, conducted by the International Joint Commission, were held at educational institutions in six Canadian and U.S. municipalities around Lakes Erie and Ontario and the international section of the St. Lawrence River.

The IJC has been investi-

gating pollution of these watercourses at the request of the Canadian and U.S. governments and its hearings were based on a three-volume report by its two technical advisory boards. The report pointed out problems ranging from bacterial contamination and disposal of dredgings to oil and gas drilling and boat pollution.

Most widely discussed item at the hearing was the report's recommendations and

conclusion concerning eutrophication. Eutrophication was stressed as the most crucial pollution problem by the advisory boards. A high emphasis was put on the need for inhibiting phosphorus inputs to the boundary waters in the report.

The IJC is presently considering the information received during the hearings and will next write its own report and recommendations for consideration by the two governments.



FURTHER RESEARCH CONTINUES on developing a fast and efficient method for defining exact quantities of silicate needed to treat iron in municipal water supplies.

## 'Anti-Iron' Process Elicits Widespread Interest

A silicate process, developed by the Ontario Water Resources Commission, to eliminate nuisance iron problems in municipal water supplies is eliciting widespread interest in both Canada and the United States.

So far the technique, which 'locks up' the iron in a soluble form, has been implemented in nine Ontario municipalities. Preparations are underway to utilize the method at five more municipalities.

Following appearance of an article on the silicate treatment in the U.S. publication *American City*, many American munici-

palities experiencing iron problems directed queries to OWRC. A Commission representative will deliver a paper on the process at the annual conference of the American Water Works Association, being held in Washington this summer.

Meanwhile, work is continuing at OWRC's research laboratory to evolve an efficient method for determining 'on-site' the amount of silicate a municipality must add at its water treatment plant to curb its iron problem. The amount of silicate needed varies since the quantity of iron in water differs from municipality to municipality.



FILTERS SHOW DRAMATIC DIFFERENCE between water treated and untreated with silicate. Iron in the untreated water deeply stains the filtration compound on the left.





## Watertalk

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### Reply To Response . . .

Response to the questionnaire distributed with our January/February issue indicates that *Watertalk* is performing a valuable function in communicating developments associated with water management.

Though the majority of respondents—over 95%—indicated they found the 'mix' of articles satisfactory, some good suggestions were proffered. (Being optimists, at heart, we assumed that when respondents replied to the question "Do you find the mix of articles satisfactory or unsatisfactory?" with a 'Yes' they intended to indicate satisfaction. The wording of the question was a slip on our part).

Since *Watertalk's* circulation encompasses people with a wide variety of interests, to satisfactorily fulfill all suggestions would necessitate a much larger publication than is possible at the moment. However, we will endeavor to incorporate suggestions where possible and in future will devote a section to specific topics suggested by readers. Meanwhile, it is encouraging to note that *Watertalk* is being used to good advantage by industrial, scientific and educational personnel, as well as the newsmedia.

The survey is also enabling us to 'trim' our mailing lists, ensuring that *Watertalk* is directed only to people concerned with water management issues.

This will permit addition to the mailing list of the many new requests that we receive daily as well as maintenance of a relatively constant press run.

## Private Groups And Individuals Launch Attack On Pollution

In answer to the question "What can the citizen do about water pollution?" many private groups and individuals have launched direct frontal assaults on the problem.

Among the most effective of these crusaders have been cottage associations. An ever-increasing number of cottage associations have been filling a vital communications gap by directing information on pollution—often provided initially by the Ontario Water Resources Commission—to their membership.

Some cottage associations, however, do far more than just relay information on pollution control. The Muskoka Lakes Association, for instance, conducts its own water sampling operations during summer months, closely monitoring bacterial conditions.

Increasingly, too, cottage associations have been performing the vital role of pinpointing individual sources of pollution in recreational lakes. After an OWRC pollution survey of Clear and Stoney Lakes, conducted last summer, revealed areas of pollution, the Birch

Cliff Cottagers Association (of Clear Lake) quickly conducted an assessment of waste disposal facilities of its members. By means of a questionnaire it established potential pollution sources and secured promises from owners with faulty facilities to bring their systems up to requirements. Total cost for the 'renovations', according to the association's own carefully documented survey report, will be about \$7,775. Like other associations, Birch Cliff also advises its members to utilize soap flakes on washing day rather than the high phosphate detergents which have been closely linked with the development of algal conditions in some lakes.

Church groups, too, are taking a more militant role in pollution combat. Characteristic of this concern is a colorful program for Sunday services, conceived recently by the United Church of Canada. A photo of last year's "turned off" Niagara Falls, printed on the program, provides "a graphic warning of what could happen if we forget that man was put on the Earth to till it

and to keep it." The program exhorts church members to perform a vital conservation role by protesting pollution and insisting that government, industry and the public act in harmony with nature.

Though all of us can, in some way, act to curb pollution, some have the opportunity to take more direct action. Peter Fessenden, owner of Craganrock Farm, near Rosemont, Ontario, perhaps exemplifies the concern which many individuals are now showing for the preservation of a healthy environment. Mr. Fessenden, however, has displayed this concern for the 18 years that he has owned Craganrock and has striven to make the farm a conservation gem.

Ever conscious of the value of fresh, clean water, Mr. Fessenden has acted to ensure that water on the farm remains "pure and healthy." As part of his personal "conservation program" Mr. Fessenden has restored a variety of trees to suitable parts of the terrain to recapture the original beauty and interest of the land.

Perhaps Mr. Fessenden's farm at Rosemont could be said to symbolize the goal that most conservation groups and individuals wish to attain,

though they may attack the problem in widely divergent styles—the preservation of a healthy and beautiful environment.



COMMISSION PHOTOGRAPHER Hans Eijssack inspects program conceived by the United Church of Canada to stimulate interest in abating pollution. Photo for the program was provided by OWRC's photographic section.

## Unique Steps Taken To Safeguard Water Quality In Drilling Operations Through Ice

As concern over pollution continues to grow, the pollution control device is becoming a common feature in many operations.

Sometimes—as in an exploratory drilling program conducted by the International Nickel Company this past winter, to investigate the

economic feasibility of extending mining operations—steps taken to safeguard water quality seem the most painstaking part of the operation.

The INCO program posed unusual problems because it was investigating ore beneath a 50 acre lake on the company's property. This necessitated drilling through the ice-cover at various strategic points on the lake.

A pollution hazard was posed mainly because of the large volumes of water used during the drilling. In drilling operations water, pumped through the core of the drill stem, cools the diamond cutting bit and keeps it clear of soil and rock while drilling is in progress. Providing there are no fissures in the bedrock, this water along with particulate matter contained in it is then returned to the surface via a 'sleeve' which encloses part of the drill stem. In land drilling operations, the particulate matter—mainly crushed rock—rapidly settles onto the ground, eliminating to a large degree the possibility of substances in the rock contaminating a watercourse. Such an 'open' system, however, is potentially dangerous in a lake drilling operation since the accumulated rock sludge would inevitably enter the lake in spring when the ice melted, possibly contaminating the water with dissolved substances.

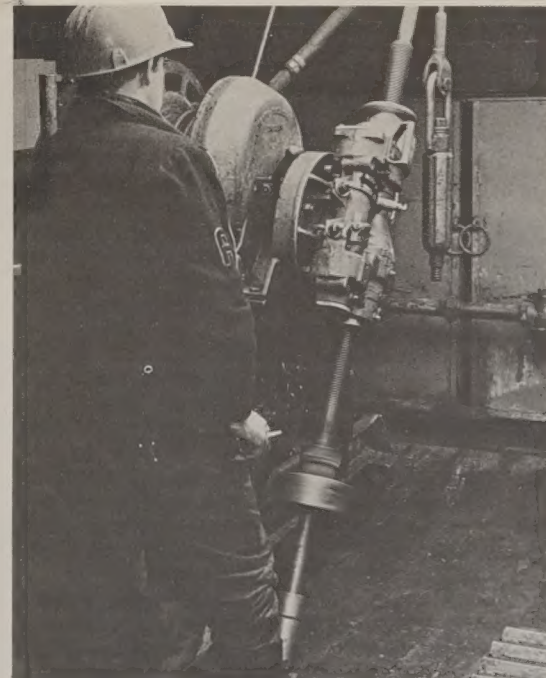
To counter this potential threat, INCO utilized a waste control system that "captured" any liquid returning to the surface, diverting it to tanks where the rock sludge was settled out. The 'used' water was then recirculated along the drill stem. INCO officials point out that this

was merely a precautionary measure since lab analyses of the water used indicated no toxic properties. The material collected in the sludge removal tanks was periodically hauled away to a disposal site. Where this 'closed' system was in effect (i.e. where the cooling water was not escaping into fissures in the

bedrock) INCO utilized a harmless vegetable compound to lubricate the drill stem in the sheathing, as an added safety measure.

As an additional precaution the fuel tank on each rig was equipped with a "catch-tank" to prevent any fuel accidentally spilled from reaching the ice.

AERIAL PHOTOGRAPH shows drill rigs strategically located for exploratory operation on the ice-covered lake. At right, worker adjusts the drill stem in preparation for boring operation.



INSIDE THE HUT, miner tends heavy-duty equipment. Note tanks in background which capture sludge and permit recirculation of water.

## Award For Best Editorial On Water Resources Goes To The Ridgetown Dominion

★Mrs. G. C. Craven of The Ridgetown Dominion was the recipient of OWRC's annual award for the best Ontario weekly newspaper editorial on the subject of water resources. Presentation of the award offered yearly by the Commission since 1968, was made at the annual convention of the Ontario Weekly Newspaper Association, held recently in

Toronto. Second and third place honors were won by The Fort Erie Times-Review and The Pickering News Advertiser, respectively.

Mrs. Craven's August 7, 1969 editorial entitled 'The Thieves Go Free' underlines the effect that pollution has on the young. Text of the editorial is as follows:

### The Thieves Go Free

Last week we visited Kenesserie Camp, the United Church Camp area on Lake Erie, near Clearville, and stood thoroughly ashamed to represent the older generation before the young campers as they told us how water pollution was affecting them.

It is one thing to read about the problem of water pollution at Windsor, or in Hamilton Bay, or somewhere else, it is another to relate it to eighty little girls who want to learn to swim and can't go in the water because it has been made dangerous by contamination, contamination caused by us, the older generation.

Last year campers were forbidden to use Lake Erie for swimming because tests proved it was contaminated. Officials quickly as possible had a swimming pool constructed. That mark you, in full view of the broad surface of Lake Erie! Bad enough as that was, the situation this year is worse, because tests proved that the water in the pool required more treatment than safety levels permit. So there we stood last week, eighty little girls grinning to prove they were good sports, and we with our head lowered in shame, looking at the lake on our right, the pool on our left, and no place to swim.

This problem of water pollution is a local, as well as a national disgrace. We have taken one of the most beautiful areas in God's world and fouled it up by the ruthless, wanton, almost deliberate destruction of our own natural resources. We have made a slogan "Ours not to use but to destroy!" We are all guilty. Industries in search of big returns on their investment have poured wastes into the rivers to avoid expense. Farmers in modern farm methods use fertilizers which find their way into the streams. Individuals carelessly or deliberately, throw bottles, tires, old cars, junk, sewage into our waterways.

This destruction of our natural resources is "theft" just as surely as if we stole the money reserve from the Bank of Canada. Thieves who steal money are followed, captured, and punished, but thieves who steal the heritage of natural resources from our children are not stopped.

Personal liberty stops when it encroaches on the rights of others. It does not give the right to clutter, bespoil, destroy the natural

resources which belong to us all. If a program of education regarding the danger of pollution is not enough, then a get-tough policy will have to be adopted with fines stiff enough to prove a real deterrent. The few must not be allowed to destroy the heritage of our youth.

As we looked at those eighty youngsters, we thought of some other children who are lucky enough to have been sent north to camps where there is still fresh air and clean water. All children do not come from families that can afford to leave a lake at our very doorstep to travel three hundred miles north in search of clean water.

And how long will those northern lakes remain pure? As lakes and streams close at home become polluted, more and more people are going north and taking their filthy habits along with them.

Pollution is caused by people, it must be cured by people. The sooner we put pressure on the authorities to make this destruction of public resources an offense that will be punished, the sooner this theft will be stopped.

Meantime, what can we do as individuals? We can start by throwing our own gum wrappers and beer bottles into the trash cans instead of into the lakes and rivers. We can encourage others to do the same thing. We can support every plan developed by industry or government to clean up this pollution, even if it causes us some personal inconvenience or expense. We have a vast fortune to gain if we win, we have everything to lose if we fail. We had better get started, it is later than we think.



Right: Mrs. Craven accepts award for her editorial at the annual convention of the OWNA. The award was presented by Lloyd Marshall, OWRC's editor of 'Watertalk'.



# ETV Film Depicts Life Of OWRC Technologist



SECRETARIAL STAFF of the Commission exchange critical comment at "premiere" of film featuring OWRC technologist Tony Burlachenko, on CHCH-TV. The film was produced by ETV as part of an occupational series.

OWRC technologist Tony Burlachenko is still waiting for offers from Hollywood, after his starring role in an educational television (ETV) film depicting the life of a technologist.

The half-hour film—part of a series designed to stimulate the interest of high schoolers in investigating careers—appeared initially on CHCH-TV, Hamilton, and was scheduled to be shown on CBLT, Toronto.

## SIX-DAY PERIOD

Filed over a period of about six days, it depicts Tony both at work and at play. The camera followed Tony as he performed water quality survey work "in the field", as well as recording him in office conditions and relaxing and dining. The voice describing the "action" in the film is Tony's own, dubbed in at the editing stage.

Tony says that he was particularly intrigued by the

technical aspects of the filming. He recalls that one sequence filmed on a particularly murky day appeared bright and sunny in the final print of the film. Particularly impressive, he says, was the manner in which the ETV crew edited their footage to evolve the theme.

The film also depicts, in a general way, how the Commission is combatting pollution.

## REMUNERATION

Tony's leap to stardom has not been accomplished without some ribbing. Several fellow staff members have commented that they didn't realize his job was so glamorous.

One thing is for certain: Tony's earnings for film-making won't rival those of the Burtons for some time. The remuneration he received from ETV was for expenses and inconvenience only—not acting ability.

## News Round-up

- The Sheraton-Brock hotel in Niagara Falls will once again be the site for the Ontario Industrial Waste Conference. This year's conference—the 17th—will be held from June 7-10. A wide variety of topics—including such subjects as operational growing pains of an industrial waste treatment plant and waste treatment at a chemicals and plastics industry—have been scheduled for the program. The conference is sponsored annually by the Ontario Water Resources Commission.
- An International Congress on Industrial Waste Water will take place in Sweden November 2-6. The congress will deal exclusively with the potentiality of decreasing water pollution from industrial waste by measures within the framework of the production processes and by treatment before the waste water reaches the receiving watercourse. This theme will be treated simultaneously in five sections, with sessions and discussions on the following subjects: chemical industries; food industries; metal industries; pulp and paper industries; miscellaneous industries. The congress is interested in hearing from persons who would be prepared to present papers in these areas. Detailed information can be secured by writing B. Göransson, secretary of the congress, at Drottning Kristinas Väg 47D, S-11428, Stockholm, Sweden.
- The Fifteenth Summer Institute in Water Pollution Control will be held at Manhattan College, Bronx N.Y. from May 25-29. Two one-week courses, supported jointly by Manhattan College and the Federal Water Pollution Control Administration will be offered for advanced study in stream and estuarine analysis and biological waste treatment. Fee for each course is \$200. For further details contact D. J. O'Connor, Environmental Engineering and Science Program, Manhattan College, Bronx, N.Y. 10471.
- A "get-tough" program with a deadline of December 31, 1971 for major clean-up of municipal and industrial pollution of provincial waters, has been announced by Nova Scotia. In announcing the program, Natural Resources Minister, W. R. Duffie said that clean-up is to cost industries about \$60 million over the next few years while cost for municipal facilities will total \$50 million over a 10-year period.

219

## Chemical Permits Issued

Permits issued by the Ontario Water Resources Commission authorizing chemical control measures for the control of aquatic nuisance numbered 219 in 1969.

The permits were issued to both private and commercial interests for the control of aquatic vegetation, black flies and mosquitoes, coarse fish, leeches and swimmer's itch.

The majority provided authorization for use of chemicals in the forest districts of Kemptonville, Lindsay, Lake Simcoe, Tweed

and Lake Huron.

Authorization for permits was 18.3% over the 185 issued in 1968 and brings to 907 the total number issued since legislation was enacted in 1962.

An OWRC pamphlet entitled "What to do about weeds in your lake" explains the operation of the permit system and denotes the availability of technical information on aquatic nuisance problems. It's available from OWRC, Public Relations and Information, 135 St. Clair Ave. W., Toronto 7.

## Industrial Pollution Control Program Outlined In Meeting At Laurentian University

The nature of Ontario's industrial pollution control program was outlined to scientific personnel as well as the general public by OWRC's director of industrial wastes, Dennis Caplice, at a recent meeting at Laurentian University in Sudbury. The meeting was sponsored by the Sudbury chapter of the Chemical Institute of Canada.



Dennis Caplice

Areas of concern indicated by Mr. Caplice included problems posed by industrial accidents and spills, disposal of concentrated liquid wastes, and taste and odor problems associated with kraft pulping operations. He pointed out that waste disposal factors are still often given "low priority" by industries establishing plants in new locations.

"In the case of mines and other resource industries, location is often restricted but this does not relieve the company of the responsibility for providing adequate treatment and suitable ultimate disposal of effluents," he said. "Other types of industries should be located where treatment can be provided and adequate capacity is available in receiving waters to accept the treated wastes without unduly affecting other uses."

Mr. Caplice also pointed out that the vast quantity of cooling water required by the hydro-electric industry to satisfy increases in demand for

electrical power has "raised many questions about the potential effects on the aquatic environment." He added that Ontario Hydro and OWRC are currently studying this problem closely at two locations.

A question and answer period, in which Mr. Caplice answered wide-ranging questions from the audience, followed his speech.

## DDT Ban Implemented By Quebec Government

Legislation banning use of DDT in Quebec was effected by the provincial government last month.

The order-in-council, based on the Public Hygiene Act, stipulates fines of up to \$20 a day for each day after the first two in which the law is broken.

The persistent pesticide is already outlawed in several Canadian provinces, including Ontario.





### Operation 'Frigid'

OUT ON THE ICE, near Nanticoke, on a cold winter day, water quality investigators of the Ontario Water Resources Commission check submersible recording equipment. Data continuously registered on magnetic tape contained in the 'robot' instrument will aid OWRC in assessing effects of development in the area on water quality and in establishing standards. In winter months the equipment, anchored beneath the ice, was recovered by diver.

## Nature And Man

### Towards A Realistic Assessment Of Priorities

After nearly two years of intensive controversy — preceded by years of effort on the part of some water management agencies — North America might be said to have arrived at the threshold of maturity in regard to its pollution problems.

Previously, environmental safeguards received low priority in many municipal and industrial developments. Now almost everyone is prepared to concede that effects on the environment should be a factor in both municipal and industrial planning. It is the unwillingness on the part of developers to give pollution control and conservation a top

priority that reveals a lingering immaturity. Controlled and guided almost robotically by maximum development per minimum cost statistics, North American society still regards the environment as the expendable item. This attitude, as well as the impractical philosophy that expansion must continue endlessly, persists in spite of ever-increasing rebellions of the environment against misuse.

On the positive side, there is some indication of a growing awareness that a policy of infinite expansion, especially when at the expense of the environment, is

unrealistic. Some U.S. specialists, for instance, are now suggesting that in the foreseeable future there may be a need to "ration" hydro-power on a priority basis. There is an awareness, too, that even in North America the population explosion is beginning to have adverse effects on both the standard of living and the environment.

We will have arrived at a mature attitude when, as a society, we analyze more clearly the effects of technological development on our total living conditions and make the economic concessions necessary to safeguard the environment from any hazards.

## \$Multi-million Construction Proceeds At South Peel

Large scale construction has again commenced on the South Peel Water and Sewage System with the awarding by the Ontario Water Resources Commission of two multi-million dollar contracts for sewage treatment facilities.

The contracts—amounting to \$6,414,921 and \$3,695,294 — provide for enlargements and extensions to the Lakeview Water Pollution Control Plant. They were awarded to V. K. Mason Construction Ltd. and Varamae Construction Ltd., both of Toronto, respectively.

The facilities will raise the sewage treatment capacity of the Lakeview plant from 24 million gallons per day to 37.5 MGD. The enlarged plant will eventually treat

wastes from an east trunk sewer currently under design besides continuing to handle wastes from the southernmost area. The east trunk sewer will service the Brampton and Chinguacousy area.

Work on enlargement of the Lakeview plant is expected to be completed late in 1971.

Major projects in the South Peel scheme embarked on to date include construction of four miles of watermain to facilitate distribution of lakewater to Brampton and Chinguacousy as well as an enlargement of the Lakeview water purification plant. Work on the watermain has been completed while enlargement of the purification plant is still in progress.

## Newly Formed Committee Co-ordinates Programs Of OWRC And Conservation Councils

A liaison committee has been formed to investigate the possibility of closer co-operation between the Ontario Water Resources Commission and the various conservation authorities.

It has been considered desirable for some time to have closer coordination of programs of the conservation authorities and OWRC — particularly with respect to water supply projects and multi-purpose reservoirs.

At a recent meeting between the committee and OWRC commissioners, a strong desire to keep lines of communication open and integrate early planning of programs was expressed.

The new committee was formed as a result of a meeting of the Conservation Authorities Council which D. J. Collins, Chairman of OWRC, attended by special

invitation. It was decided that the Commission should have a representative on the council who would also be a member of the committee. A. K. Watt, an assistant general manager of the Commission, was named to represent OWRC. Others named to the committee were

Dr. G. R. Lord, Metro Toronto and Region Conservation Authority; J. S. Bauer, Grand River Conservation Authority; C. Caswell, Junction Creek Conservation Authority; J. C. Thatcher, deputy minister, Department of Energy and Resources Management; and A. S. L. Barnes, director, conservation authorities branch, Department of Energy and Resources Management.

Mr. Watt will examine ways in which Commission projects can be coordinated early in the planning stages with those of the various authorities, in order to ensure fully integrated water management procedures occur in the various river valleys.

The committee is expected to present recommendations to the council later in the year.



A. K. Watt



## Nixon Continues Emphasis On Pollution, Water Clean-up Proposals Forwarded

In his first legislative message to congress for 1970, U.S. President Richard Nixon continued the emphasis on environmental matters with which he commenced the new year.

Basically, the Nixon plan for water pollution control would make available \$4 billion in grants to states and municipalities over five years for building waste treatment plants, with the states and cities selling bonds to provide \$6 billion in matching funds. The \$4 billion would be committed at an annual rate of \$800 million.

Among other proposals made by the President to spur water clean-up:

- Violation of effluent requirements would be considered sufficient cause for court action.
- Failure to meet water quality standards or implementation schedules

would be made subject to court-imposed fines of up to \$10,000 per day.

- Amendment of Federal-state water quality standards to impose "precise

effluent requirements on all industrial and municipal sources".

- Municipalities receiving federal assistance in constructing plants would be

required to impose "reasonable users' fees" on industrial users to meet the costs of treating industrial wastes.

Agricultural wastes were

described by the President as "the most troublesome" source of wastes to control, and he cited some programs presently under way to control them.

## Computerized System Evolved To Provide Financial Data

A new computerized system has been developed by OWRC to provide the financial information used to control over 300 water and sewage projects in the province. The automated process utilizes sophisticated equipment located at the department of highways to produce detailed monthly operating cost summaries.

Besides delineating actual expenditures compared with budgeted costs for projects, on both an individual and combined total basis, the system will produce 'exception' reports on projects in which actual expenditures exceed or are less than budgeted expenditures. Additionally, charge account and petty cash purchases made on each project will be defined.

In the past much of this information was provided by manually produced cost

summaries. The automated system will allow:

- speedier production of the summaries.
- elimination of much tedious and time-consuming clerical effort.
- provision of additional financial information.
- ability to classify expenditures using more account classifications than were previously possible.
- a sound basis for the application of future refinements and extensions to the system.

Further refinements to this

system, as well as the introduction of additional automated financial systems, will assist the Commission in ob-

taining the optimal degree of efficiency and effectiveness in the reporting of financial information.

## U Thant Calls For World-Wide Network To Take Action Against Pollution

A world-wide network to report on and forecast environmental pollution was proposed by UN secretary-general U Thant last month. Deeming the environmental crisis a problem unsurpassed in the history of the United Nations, Thant termed the growing interest in pollution problems "the beginning of a new era."

Thant urged governments to come up with new economic, legal and political measures to combat pollution.

The world body, he said, would become "a centre for harmonizing the actions of the nations in solving the problem."

## Pollution Translator Published

A definitive translation from English to French of terms used in the water management field has been published by the Association *Quebecoise des Techniques de l'Eau*.

It contains more than 3,000 terms translated to French. Besides assisting English personnel in interpretation of French Canadian water terminology, it is anticipated the publication will aid in the standardiza-

tion of French terms of reference.

The publication is available, at a cost of \$2.00 from the office of the association, 6065 ouest rue Sherbrooke, suite 4, Montreal, Quebec.

## 338 Register For CIPC Conference

Official registration for the First Annual Conference of the Ontario Branch of the Canadian Institute on Pollution Control totaled 338.

The conference, held this month at the Holiday Inn in Toronto, investigated pollution topics covering a broad area. Among the speakers were Norman Pearson, chairman of the Centre for Resources Development, University of Guelph, and Dr. Donald A. Chant, chairman, Dept. of Zoology, University of Toronto. Hon. George A. Kerr, Minister of Energy and Resources Management was guest speaker at the first annual banquet.

A full report on the conference will be featured in the next edition of *Water-talk*.

## Trent Implements Credit Course On Pollution

Trent University at Peterborough has announced it will start a credit course on pollution this fall for third or fourth year undergraduate students. Trent will be one of few universities in North America offering such a course.

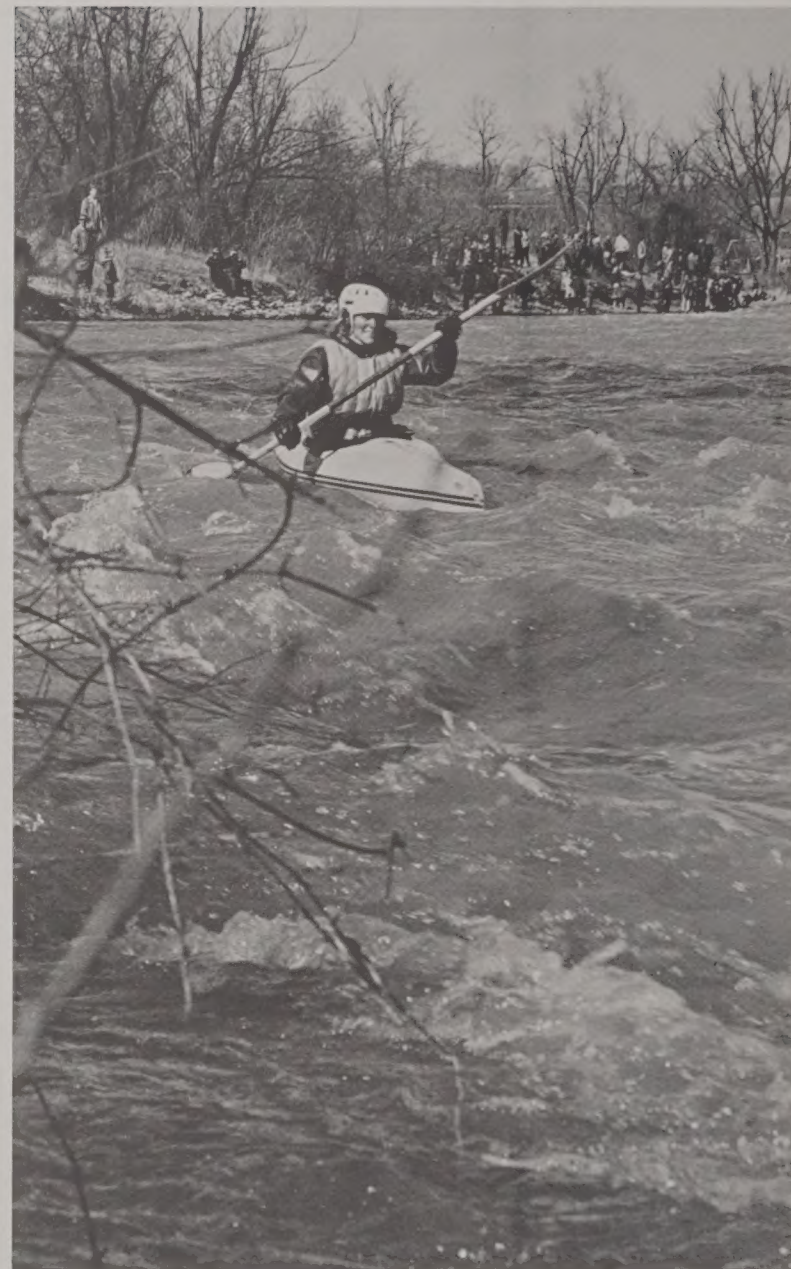
According to President T. H. B. Symons, the decision to implement the new course reflects the "strong concern" with which members of the university view pollution. He added that the course will enable research work conducted by the university over

the past five years to be turned to practical advantage.

The course will be directed by Dr. David Carlisle, head of the biology department, which has been involved in research work along the Trent River system since 1965.

The new course will concern all aspects of pollution—air, land and water—but will focus particularly on water pollution in Ontario.

Trent University also is engaged in planning for a seminar on pollution that is to be held during the summer.



## Kayaking On The Credit

Kayaker skims through waves in annual Whitewater Races on Credit River sponsored by the Ontario Voyageur's Club. Spring run-off created whitewater conditions, though not as fierce as usual. The race probably marks the earliest recreational use of the waterway.